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WASHINGTON, DC 20005-1209

EXAMINER
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ADAMS, CHARLES D

ART UNIT	PAPER NUMBER
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2164

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03/05/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/688,903

**Applicant(s)**

YASUSHI ET AL.

**Examiner**

CHARLES D. ADAMS

**Art Unit**

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Remarks*

1. In response to communications filed on 11 December 2007, claims 1, 7, and 8 are amended and claims 12-14 are added per applicant's request. Claims 1-14 are pending in the application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery et al. (US Patent 6,545,209) in view of Nakano (US Patent 7,010,515).

As to claim 1, Flannery et al. teaches:

Comparing a musical characteristic of representative music, which the user has set and serves as a basis for the search, with a plurality of musical characteristics of a plurality of pieces of music, which are search targets (see 5:56-63 and 7:11-29);

Calculating a plurality of degrees of similarity to the representative music with respect to musical characteristics for the respective plurality of pieces of music which are search targets based on the comparing (see 7:45-49 and 8:31-36);

selecting a plurality of pieces of music in descending order of the degree of similarity (see 7:65-8:20 and 10:7-17);

Flannery et al. does not teach sorting the pieces of selected music based on stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music.

Nakano et al. teaches sorting the pieces of selected music based on stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music (see 7:1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teachings of Nakano et al., because Nakano et al. teaches “to allow a calculation of similarities and discrepancy in which there are clear differences in accordance with the content” (see 1:42-44). While Nakano calculates similarities and dissimilarities between texts, it uses an equation that takes into account similarities divided by a frequency. It would have been obvious to one of ordinary skill in the art to use a similar equation.

As to claim 7, Flannery et al. teaches:

a representative music setting unit configured to set representative music serving as a basis for the search (see Flannery et al. 5:56-63 and 7:11-29);

a comparing unit configured to compare a musical characteristic of the representative music and a plurality of musical characteristics of a plurality pieces of music, which are search targets (see Flannery et al. 5:56-63 and 7:11-29);

a calculating unit configured to calculate a plurality of degrees of similarity to the representative music with respect to musical characteristics for the respective plurality of pieces of music which are search targets based on the comparing (see Flannery et al. 7:45-49 and 8:31-36);

a similar music selecting unit configured to select a plurality of pieces of music in descending order of the degree of similarity (see Flannery et al. 7:65-8:20 and 10:7-17);

Flannery et al. does not teach a list generating unit configured to generate a music list in which the selected pieces of music are stored in ascending order or descending order on a basis of a stimulation coefficient of each of the selected pieces of music, the stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music

Nakano et al. teaches a list generating unit configured to generate a music list in which the selected pieces of music are stored in ascending order or descending order on a basis of a stimulation coefficient of each of the selected pieces of music, the stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music (see 7:1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teachings of Nakano et al., because Nakano et al. teaches “to allow a calculation of similarities and discrepancy in which there are clear differences in accordance with the content” (see 1:42-44). While Nakano calculates similarities and dissimilarities between texts, it uses

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an equation that takes into account similarities divided by a frequency. It would have been obvious to one of ordinary skill in the art to use a similar equation.

As to claim 8, Flannery et al. teaches:

Comparing a musical characteristic of representative music, which the user has set and serves as a basis for the search, with a plurality of musical characteristics of a plurality of pieces of music, which are search targets (see Flannery et al. 5:56-63 and 7:11-29);

Calculating a plurality of degrees of similarity to the representative music with respect to musical characteristics for the respective plurality of pieces of music which are search targets based on the comparing (see Flannery et al. 7:45-49 and 8:31-36);

a plurality of pieces of music in descending order of the degree of similarity (see Flannery et al. 7:65-8:20 and 10:7-17);

Flannery et al. does not teach sorting the pieces of selected music based on stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music.

Nakano et al. teaches sorting the pieces of selected music based on stimulation coefficients calculated by dividing the similarities of the pieces of selected music by the played frequencies of the pieces of selected music (see 7:1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teachings of Nakano et al., because Nakano et al. teaches "to allow a calculation of similarities and

Art Unit: 2164

discrepancy in which there are clear differences in accordance with the content" (see 1:42-44). While Nakano calculates similarities and dissimilarities between texts, it uses an equation that takes into account similarities divided by a frequency. It would have been obvious to one of ordinary skill in the art to use a similar equation.

As to claims 9, 10, and 11, Flannery et al. as modified teaches wherein each musical characteristic is a numerical value representing at least one of a beat cycle, a beat intensity or respective one of the plurality of pieces of music and a rate of change thereof (see Flannery et al. 8:21-36).

As to claims 12, 13, and 14, Flannery et al. as modified teaches wherein each of the degrees of similarity is expressed as a correlation between the musical characteristics of the representative music and a respective one of the plurality of pieces of music (see Flannery et al. 8:21-36).

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery et al. (US Patent 6,545,209) in view of Nakano (US Patent 7,010,515), and further in view of Robinson (US Patent 7,072,846).

As to claim 2, Flannery et al. the music searching method of claim 1.

Flannery et al. does not teach referencing played frequencies, which are associated the selected pieces of music, respectively.

Robinson as modified teaches referencing played frequencies, which are associated the selected pieces of music, respectively (see Robinson 11:33-46); and

Sorting, on the basis of the played frequencies, the selected pieces of music in ascending order or descending order (see Robinson 11:33-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teaching of Robinson et al., since Robinson et al. teaches "various means for inter-user communication so that communities of people with similar tastes are formed" (see 1:59-61) and "much of this disclosure will focus on music applications of the invention" (see 1:57-58).

3. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery et al. (US Patent 6,545,209) in view of Nakano (US Patent 7,010,515), and further in view of Robinson (US Patent 7,072,846), and further in view of Seto et al (US Pre-Grant Publication 2002/0041692).

As to claim 3, Flannery et al. as modified teaches the method of claim 2.

Flannery et al. as modified does not teach updating the played frequencies each time a piece of music is played; and



Seto et al. teaches updating the played frequencies each time a piece of music is played (see paragraph [0038]); and

Flannery et al. as modified teaches:

Sorting, on the basis of the updated played frequencies, the selected pieces of music in ascending order or descending order (see Seto et al. paragraph [0038] and Figures 2 and 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. to include the teaching of Seto et al., since Seto et al. teaches that “providing a favorite piece of music to a vehicle driver during a driving operation of the vehicle driver, detects favorite information to discriminate favorite tendency of the vehicle driver with respect to the favorite piece of music, analyzes driver's favorite on the basis of the detected favorite information and storing analyzed resultant data, selects the favorite music piece on the basis of the analyzed resultant data, and provides the selected favorite music piece to the vehicle driver” (see paragraph [0010]) “.

As to claim 5, Flannery et al. as modified teaches the method of claim 2.

Flannery et al. as modified does not teach sorting, on the basis of environment in which the pieces of music are played, the selected pieces of music in ascending order or descending order.

Seto et al. teaches sorting, on the basis of environment in which the pieces of music are played, the selected pieces of music in ascending order or descending order (see Figure 3, "Location" column).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teaching of Seto et al., since Seto et al. teaches "providing a favorite piece of music to a vehicle driver during a driving operation of the vehicle driver, detects favorite information to discriminate favorite tendency of the vehicle driver with respect to the favorite piece of music, analyzes driver's favorite on the basis of the detected favorite information and storing analyzed resultant data, selects the favorite music piece on the basis of the analyzed resultant data, and provides the selected favorite music piece to the vehicle driver" (see paragraph [0010]).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery et al. (US Patent 6,545,209) in view of Nakano (US Patent 7,010,515), and further in view of Robinson (US Patent 7,072,846), and further in view of Ward et al. (US Patent 6,526,411).

As to claim 4, Flannery et al. as modified teaches the method of claim 1.

Flannery et al. as modified does not teach updating the played frequencies each time a piece of music is skipped.

Ward teaches updating the played frequencies each time a piece of music is skipped (see 8:28-35);

Flannery et al. as modified teaches sorting, on the basis of the updated played frequencies, the selected pieces of music in ascending order or descending order (see Ward 8:28-35).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teaching of Ward, since Ward teaches that “to provide a dynamic playlist system and method for a dynamic playlist of digital items that automatically adds items to, or subtracts items from, the playlist, as the items become available” (see 1:50-53).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flannery et al. (US Patent 6,545,209) in view of Nakano (US Patent 7,010,515), and further in view of Robinson (US Patent 7,072,846), and further in view of Cluts (US Patent 5,616,876).

Flannery et al. as modified teaches the method of claim 1.

Flannery et al. as modified does not teach acquiring, from a multi-channel digital broadcast, the pieces of music that serve as search targets.

Cluts teaches acquiring, from a multi-channel digital broadcast, the pieces of music that serve as search targets (see 2:33-48, and 7:56-65).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have modified Flannery et al. by the teaching of Cluts,

since Cluts teaches that “indeed, it is feasible that this interactive network will have sufficient bandwidth to supply hundreds of channels of programming information, thereby leading to an explosion of programming options available to subscribers” (see 1:40-44).

### ***Response to Arguments***

6. Applicant's arguments with respect to the claim have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

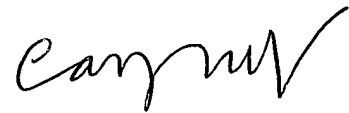
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES D. ADAMS whose telephone number is (571)272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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